CLAIMS

1. A process for improving the hydrolysis resistance of a urethane elastomer, with said elastomer being prepared by the reaction of a hydroxylated compound with a prepolymer in the presence of a catalyst, and optionally a foaming agent and a surfactant,

- said hydroxylated compound comprising at least one polyester polyol resin,

- said prepolymer being prepared by a reaction of at least a second polyester polyol resin and/or at least one polyether polyol resin and at least one polyisocyanate, with the polyisocyanate being in molar excess with respect to the second polyester polyol resin and/or the polyether polyol resin,

- both the first and second polyester polyol resin being prepared by a reaction of at least one polyacid with at least one polyol,

wherein at least the first polyester polyol resin is prepared by a reaction of at least one aliphatic dicarboxylic acid comprising 8 to 12 carbon atoms and an ortho-phthalic acid or its corresponding anhydride, with at least one polyol.

2. A process according to claim 1 wherein, in order to prepare at least the first resin, the molar ratio of the ortho-phthalic acid or anhydride to the aliphatic dicarboxylic acid is between 30:70 and 60:40.

3. A process according to claim 1 wherein the aliphatic dicarboxylic acid used to prepare at least the first polyester polyol resin is sebacic acid.

4. A process according to claim 1 wherein the polyol used to prepare at least the first polyester polyol resin is chosen from the group consisting of monoethylene glycol, diethylene glycol, butanediol, and their mixtures.

5. A process according to claim 4 wherein the polyol used to prepare at least the first polyester polyol resin is diethylene glycol.

6. A process according to claim 1 wherein said prepolymer is prepared by a reaction of at least a second polyester polyol resin and at least one polyisocyanate, and, for the preparation of said second polyester polyol resin, the polyacid used is chosen from among the group consisting of succinic acid, glutaric acid, adipic acid, and their mixtures, and the polyol used is chosen from among the group consisting of monoethylene glycol, diethylene glycol, butanediol, and their mixtures.

7. A polyester polyol comprising the reaction product of at least one aliphatic dicarboxylic acid having 8 to 12 carbon atoms and ortho-phthalic acid or its corresponding anhydride, with at least one polyol.

8. A polyester polyol according to claim 7 wherein the molar ratio of the ortho-phthalic acid or anhydride to the aliphatic dicarboxylic acid is between 30:70 and 60:40.

9. A polyester polyol according to claim 7 wherein the aliphatic dicarboxylic acid used is sebacic acid.

10. A polyester polyol according to claim 7 wherein the polyol used is chosen from among the group consisting of monoethylene glycol, diethylene glycol, or butanediol, and mixtures thereof.

11. A polyester polyol according to claim 10 wherein the polyol used is

diethylene glycol.

12. A urethane elastomer having an improved resistance to hydrolysis obtained by the process as defined in claim 1.

13. The use of the urethane elastomer of claim 12 to make shoe soles.